

In the claims:

1-4. (Cancelled)

5. (Currently Amended) ~~A method of claim 1~~ The method of claim 13 wherein said damascene structure is a dual damascene structure.

6. (Currently Amended) ~~A method of claim 1~~ The method of claim 12 wherein said ~~metal isolation technique~~ step of removing titanium nitride is by CMP.

7. (Currently Amended) The method of ~~claim 4~~ claim 14 wherein said etch-stop layer is silicon nitride.

8. (Currently Amended) The method of ~~claim 1~~ claim 16 wherein said etching through said contact hole pattern in said second photoresist layer into said ILD layer is performed with a mixture comprising gases of Ar, CHF₃ and C₄F₈.

9. (Currently Amended) The method of ~~claim 3~~ claim 17 wherein said cleaning is performed by RIE.

10. (Currently Amended) The method of ~~claim 1~~ claim 15 wherein said etching through said line trench pattern of said first photoresist layer into said IMD layer is performed with a mixture comprising gases of O₂, He and CF₄.

11. (Original) The method of claim 8 wherein said etching through said line trench pattern in said first phototresist layer into said IMD layer is performed until said etch-stop layer is reached.

12. (New) A method for fabricating a damascene structure comprising at least one conductive metal line formed in a top dielectric layer over a substrate, said damascene structure characterized by improved resistance and acceptable adhesion, said method comprising the steps of:

providing a structure comprising a substrate and a top dielectric layer above said first dielectric layer;

forming a trench having sidewalls and a bottom for at least one conductive line in said top dielectric layer;

physical vapor depositing (PVD) a titanium nitride layer to obtain a liner having very poor step coverage such that the top surface of said top dielectric layer is covered with a layer of titanium nitride and the sidewalls of said at least one trench are substantially covered with a layer of titanium nitride while the bottom of said at least one trench is left substantially free of titanium nitride during said PVD deposition;

removing the titanium nitride from the surface of the top dielectric layer and leaving the titanium nitride on the sidewalls intact; and

depositing tungsten into said damascene structure so as to fill said contact hole/via and said at least one trench.

13. (New) The method of claim 12 wherein said step of providing a structure further comprises a bottom dielectric layer between the substrate and the top dielectric layer, said

method further comprising the step of forming at least one contact hole/via extending from the bottom of said trench formed in the top dielectric layer and through said bottom dielectric layer to said substrate and filling said contact hole/via together with said at least one trench with tungsten.

14. (New) The method of claim 13 wherein said step of providing a structure further comprises an etch stop layer between said top dielectric layer and said bottom dielectric layer.

15. (New) The method of claim 14 wherein said bottom dielectric layer is an ILD (inter level dielectric) layer formed of silicon oxide and said top dielectric layer is an IMD (inter metal dielectric) layer formed of a material selected from the group consisting of phosphosilicate glass (PSG) and an oxide formed by the decomposition of tetraethyl orthosilicate (TEOS)

16. (New) The method of claim 15 further comprising the steps of forming and patterning a first layer of photoresist having an image of said trench prior to said step of forming a trench and forming and patterning a second layer of photoresist having an image of said contact hole/via prior to said step of forming at least one contact hole.

17. (New) The method of claim 13 further comprising the step of cleaning said contact hole/via prior to depositing tungsten.

18. (New) The method of claim 12 wherein said step of removing titanium nitride comprises removing with a reactive ion etch (RIE) using a mixture of SF₆, HBr and CCL₄